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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/001,688	10/25/2001	Theodore R. Sama	10010819-1	3172

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AGILENT TECHNOLOGIES, INC.  
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EXAMINER

TUNG, JOYCE

ART UNIT

PAPER NUMBER

1637

DATE MAILED: 12/19/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. <b>10/001,688</b>	Applicant(s) <b>Sana et al.</b>	
	Examiner <b>Joyce Tung</b>	Art Unit <b>1637</b>	

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.  
 If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.  
 If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.  
 Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).  
 Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)  Responsive to communication(s) filed on Oct 16, 2002  
 2a)  This action is **FINAL**.      2b)  This action is non-final.  
 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

**Disposition of Claims**

4)  Claim(s) 1-17 is/are pending in the application.  
 4a)  Of the above, claim(s) 1-5 and 9-14 is/are withdrawn from consideration.  
 5)  Claim(s) \_\_\_\_\_ is/are allowed.  
 6)  Claim(s) 6-8 and 15-17 is/are rejected.  
 7)  Claim(s) \_\_\_\_\_ is/are objected to.  
 8)  Claims 1-17 are subject to restriction and/or election requirement.

**Application Papers**

9)  The specification is objected to by the Examiner.  
 10)  The drawing(s) filed on \_\_\_\_\_ is/are a)  accepted or b)  objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 11)  The proposed drawing correction filed on \_\_\_\_\_ is: a)  approved b)  disapproved by the Examiner.  
     If approved, corrected drawings are required in reply to this Office action.  
 12)  The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)  Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a)  All b)  Some\* c)  None of:  
     1.  Certified copies of the priority documents have been received.  
     2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
     3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \*See the attached detailed Office action for a list of the certified copies not received.

14)  Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
 a)  The translation of the foreign language provisional application has been received.

15)  Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s). <u>4</u>	6) <input type="checkbox"/> Other: _____

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## **DETAILED ACTION**

### ***Election/Restriction***

1. Applicant's election with traverse of Group II in Paper No. 6 is acknowledged. The traversal is on the ground(s) that Group I should be examined together with Group II since there is no serious burden on the examiner. This is not found persuasive because as addressed in the restriction required as mailed 9/11/2002 Invention I, claims 1-5, and 9-14 are drawn a composition comprising the chemical components formula: R(NH<sub>2</sub>)C=O which can be used as starting material to make nitrile. In addition, the classifications of Group I and Group II are different in which Group I is classified in class 514, subclass 1 and Group II is classified in class 435, subclass 6. Therefore, there is a burden for the examiner to search the different groups.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 1-5 and 12-14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Group I, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 6.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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Claims 6-8 and 15-17 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for applying the chemical compound urea in nucleic acid hybridization buffer for nucleic acid hybridization (See pg. 19, example 7), does not reasonably provide enablement for applying polyacrylamide or the chemical compound with any alkyl group in nucleic acid hybridization buffer for nucleic acid hybridization since polyacryl is alkyl group. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to carry out or make the invention commensurate in scope with these claims.

In Ex parte Forman, 230 USPQ 546 (Bd. App. 1986), the Board considered the issue of enablement in molecular biology. The Board summarized eight factors to be considered in a determination of "undue experimentation". These factors include: (a) the quantity of experimentation necessary; (b) the amount of direction or guidance presented; (c) the presence or absence of working examples; (d) the nature of the invention; (e) the state of the prior art; (f) the relative skill of those in the art; (g) the predictability of the art; and (h) the breadth of the claims.

In considering these factors: (a) in order to practice the invention, the practitioner must be able to apply to a chemical compound with any alkyl group, for example, polyacrylamide, (b) the specification provides guidance only with regard to apply urea in nucleic acid hybridization buffer; (c) working examples are presented only with regard to apply urea in nucleic acid

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hybridization buffer (See pg. 19, example 7); (d) the invention is directed to apply the chemical compound with an alkyl group which can be polyacrylamide; (e) the prior art teaches applying urea in the nucleic acid hybridization (See pg. 1080, the Introduction, Biochemical and Biophysical Research Communication); (f) the level of skill in molecular biology is high; (g) the results of experiments involving applying the chemical compound with an alkyl group, for example, polyacrylamide is not predictable; (h) the claims are broadly drawn, reciting applying the chemical compound with any alkyl group which can be polyacrylamide. Based on the above analysis, one of ordinary skill in the art would be subject to undue experimentation in applying the chemical compound with any alkyl groups in nucleic acid hybridization buffer.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 7 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. claims 7 and 16 are vague and indefinite because of the language "said probe and target are heated to at least their standard hybridization temperature". Since the preamble addresses that the hybridization is taken place at a temperature lower than their standard hybridization temperature, it appears that the language is conflicting with the preamble. Clarification is required.

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***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 6-8 and 15-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Kourilsky et al. (Biochemical and Biophysical Research Communications, 1970, Vol. 41(4), pg. 1080-1087).

Kourilsky et al. disclose that DNA-RNA hybridization takes place at relatively low temperature in the presence of urea which is the claimed chemical component R(NH<sub>2</sub>)C=O (See pg. 1080, the Introduction) in which R=NH<sub>2</sub> is urea (See pg. 10, lines 5-9 of the specification).

Thus the teachings of Kourilsky et al. anticipate the limitations of claims 6-8 and 15-17.

8. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Joyce Tung whose telephone number is (703) 305-7112. The examiner can normally be reached on Monday-Friday from 8:00 AM-4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached at (703) 308-1119 on Monday-Friday from 10:00 AM-6:00 PM.

Any inquiries of a general nature or relating to the status of this application should be directed to the Chemical/Matrix receptionist whose telephone number is (703) 308-0196.

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9. Papers related to this application may be submitted to Group 1600 by facsimile transmission. Papers should be faxed to Art Unit 1637 via the PTO Fax Center located in Crystal Mall 1 using (703) 305-3014 or 308-4242. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989).

Joyce Tung

  
December 12, 2002

  
GARY BENZION

SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1600